

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POLAROID CORPORATION)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 06-738 (SLR)
)	
HEWLETT-PACKARD COMPANY,)	
)	
Defendant.)	

**POLAROID'S REPLY BRIEF IN SUPPORT OF ITS MOTION TO EXCLUDE
DR. RANGARAJ RANGAYYAN'S OPINIONS CONCERNING OBVIOUSNESS**

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INTRODUCTION

Hewlett-Packard (“HP”) makes three arguments for why Dr. Rangaraj Rangayyan’s opinions should not be excluded. None has any merit:

- Dr. Rangayyan’s failure to use the proper obviousness methodology falls squarely within the province of a *Daubert* motion, which Polaroid has properly brought before this Court.
- Polaroid’s motion addresses *each* of Dr. Rangayyan’s obviousness opinions from both his initial report (“Report”) and his improper supplemental report (“Supplemental Report”), and relying on one reference (rather than multiple references) does not change the requisite methodology for obviousness.
- Dr. Rangayyan has not applied the proper methodology required for obviousness. HP’s “wordsmithing” of Dr. Rangayyan’s Report in its opposition brief does not cure Dr. Rangayyan’s *Daubert* deficiencies. Even assuming HP’s belated “rewording” were proper — which it is not — there is still no indication of why one of ordinary skill in the art would be motivated to modify or combine the prior art references. Nowhere in Dr. Rangayyan’s Report, Supplemental Report, or in his new declaration (which improperly offers additional new opinions) (“Declaration”), does Dr. Rangayyan attempt to show that one of ordinary skill in the art would have had a reasonable expectation of success in doing so.

Because Dr. Rangayyan did not apply the proper methodology for obviousness, his obviousness opinions should be precluded. *See, e.g., Trueposition, Inc. v. Andrew Corp.*, Civ. No. 05-747-SLR, 2007 WL 2429415, at *1 (D. Del. Aug. 23, 2007) (precluding expert from testifying where he failed to set forth the proper invalidity analysis).¹

¹ HP’s attempt to distinguish Dr. Rangayyan’s work from *TruePosition* is unpersuasive. *See* D.I. 216 at 10-11 n. 3 (*citing* Memorandum in Support of True Position’s Motion to Exclude the Invalidity Testimony of Dr. Davis Goodman Pursuant To Federal Rule of Evidence 702, p. 17-18). The fact that the invalidity expert in *Trueposition* may have made *different* errors from the errors of Dr. Rangayyan does nothing to revive Dr. Rangayyan’s analysis. Here, as in *TruePosition*, Dr. Rangayyan’s opinions are unreliable because he did not apply the proper methodology. *See True Position*, 2007 WL 2429415, at *1.

ARGUMENT

I. THIS IS A PROPER DAUBERT MOTION.

HP's contention that Polaroid's Motion should be denied because "it is actually an assertion that there is insufficient evidence of motivation to combine for a Jury to find the asserted claims obvious in light of combinations discussed by Dr. Rangayyan" is incorrect. D.I. 216 at 10. Notably, at the same time that HP makes this contention, HP also states in its brief that "Polaroid does not deny that Dr. Rangayyan's opinion is based on sufficient facts or data." *Id.* at 7. Regardless of this inconsistency, the fact is that this Motion is not about the sufficiency of the evidence; it is about the methodology and analysis Dr. Rangayyan used to arrive at his obviousness opinions.

Dr. Rangayyan did not apply the proper methodology in rendering his obviousness opinions. Specifically, he did not explain why one of ordinary skill in the art would be motivated to combine the prior art references he describes; nor did he explain why one of ordinary skill in the art would have had a reasonable expectation of success in doing so. *See* D.I. 172 *generally*; *see also KSR Intl. Co. v. Teleflex Inc.*, – U.S. –, 127 S. Ct. 1727, 1741 (2007); *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008). Dr. Rangayyan's failure to follow the proper analysis speaks to the reliability of his opinions, and therefore this issue is properly raised under *Daubert* and its progeny. *See Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993); *Izumi Prods. Co. v. Koninklijke Philips Elecs. N.V.*, 315 F.Supp.2d 589, 600 (D. Del. 2004).

II. THE LEGAL STANDARD FOR OBVIOUSNESS IS THE SAME WHETHER IT IS APPLIED TO A COMBINATION OF PRIOR ART OR TO A SINGLE REFERENCE.

HP's contention that Polaroid has failed to address HP's allegations of obviousness based on the Okada patent alone is meritless. D.I. 216, at 12. The legal standard for obviousness is the same for multiple prior art references or a single prior art reference.

A. Polaroid Analyzed Each Of Dr. Rangayyan's Obviousness Opinions.

In his initial expert report, Dr. Rangayyan failed to assert Okada as a single reference rendering the '381 patent obvious. D.I. 170, Ex. A (Rangayyan Report). Dr. Rangayyan did not make this argument until serving his inappropriate Supplemental Report, which Polaroid has moved to preclude as coming too late. D.I. 190, Ex. C (Supp. Rangayyan Report); D.I. 172 (Polaroid's Motion to Preclude) at Statement of Facts § I. Nevertheless, Polaroid did not limit its Motion to Dr. Rangayyan's obviousness opinions based on multiple references; Polaroid merely provided examples from Dr. Rangayyan's Report that evidenced that Dr. Rangayyan's analysis was incomplete and improper. *Id. generally*. Furthermore, Polaroid specifically referenced the late-disclosed obviousness opinions asserted in Dr. Rangayyan's Supplemental Report and explained that Dr. Rangayyan did nothing there to correct the errors in his obviousness analysis. D.I. 170 at 2, n. 1.

B. The Legal Standard For Obviousness Is The Same For Multiple References As It Is For A Single Reference.

Even if this Court does not exclude Dr. Rangayyan's Supplemental Report, the fact that Dr. Rangayyan relied on a single reference does not relieve him from applying the appropriate obviousness methodology, which is the same for a single prior art reference as for multiple prior art references. It is black letter law that when an expert relies on a single reference

for obviousness, he or she must analyze whether there was a reason to modify the teachings of that reference. *See In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) (“Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference”); *SIBIA Neurosciences, Inc. v. Cadus Pharmaceutical Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000) (“In appropriate circumstances, a single prior art reference can render a claim obvious. ... Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.”).

KSR has not eliminated this requirement. After *KSR*, the United States Patent and Trademark Office (“USPTO”) published new guidelines specifically stating as a requirement “***Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference*** or to combine prior art reference teachings to arrive at the claimed invention.” *See Board of Trustees of Leland Stanford Junior University v. Roche Molecular Sys.*, No. C. 05-04158 MHP, 2008 WL 2241468, at *16-17 (N.D. Cal. May 29, 2008) (citing EXAMINATION GUIDELINES FOR DETERMINING OBVIOUSNESS UNDER 35 U.S.C. 103 IN VIEW OF THE SUPREME COURT DECISION IN *KSR INTERNATIONAL CO. V. TELEFLEX INC.*, 72 FED.REG. 57526-01 (OCT. 10, 2007) at 57529 at G (emphases added).

HP has not cited — and cannot reference — any cases eliminating this requirement after *KSR*. D.I. 216, at 12. To the contrary, Dr. Rangayyan admits in his Report: “I have also been told that a claim is ‘obvious’ if one of ordinary skill in the art would be ***motivated to modify an item of prior art***, to combine two or more items of prior art to arrive at the claimed invention.” D.I. 170, Ex. A at ¶ 133 (emphasis added). Yet, Dr. Rangayyan does not perform

this analysis, and his obviousness opinions should be excluded as not reliable or helpful to the trier of fact because he not apply the proper obviousness methodology.

III. DR. RANGAYYAN DID NOT APPLY THE PROPER OBVIOUSNESS METHODOLOGY.

HP's claim that Dr. Rangayyan both "understood" and applied the proper methodology for obviousness is unsupported. Indeed, Dr. Rangayyan's multiple reports and testimony all confirm that he did not apply the proper obviousness methodology. D.I. 216, at 12. Although he vaguely referenced part of the correct obviousness methodology in his Report (*see* D.I. 170, Ex. A at ¶133), time and again, Dr. Rangayyan failed to actually apply it.

HP's contention that Dr. Rangayyan "understands" that motivation to combine is part of the requisite analysis for obviousness is not the test under the Federal Rules of Civil Procedure and *Daubert* principles. Whether or not Dr. Rangayyan "understands" the appropriate obviousness analysis — for which there is no evidence² — is not relevant because he did not *apply* the correct methodology in rendering his opinions.

² To the contrary, Dr. Rangayyan's deposition testimony highlights his lack of any understanding of the correct standard that should be applied:

Q. Did you provide an opinion or did you reach a conclusion as to why one of skill in the art would combine the teachings of Sabri with those found in the Gonzalez algorithm?

A. That could be left open. It depends upon the end goal of the person who would put multiple methods together. Depending upon the combination employed of the multiple methods, the end result could be different.

So I cannot say what the aim or purpose of that could possibly be. Different results could be achieved.

(D.I. 170, Ex. B, (Rangayyan Dep.) 252:14–24).

Before Dr. Rangayyan concluded that any claim of the '381 patent claim was obvious, he should have analyzed whether or not one of skill in the art would have been motivated to combine the identified references and would have had a reasonable expectation of success in doing so. *See Takeda Pharm. Co. Ltd. v. Teva Pharm. USA, Inc.*, 542 F. Supp. 2d 342, 356–59 (D. Del. 2008) (holding that a defendant must prove motivation to combine and a reasonable expectation of success). Dr. Rangayyan did not do so. Far from conducting a proper analysis, Dr. Rangayyan does not *even mention* in his Report, Supplemental Report, or Declaration that in addition to showing a motivation to combine, he had to explain why one of ordinary skill in the art would have had reasonable success in doing so. *See* D.I. 170, Ex. A (Rangayyan Report); D.I. 190, Ex. C (Supp. Rangayyan Report) and Rangayyan Declaration.

Because Dr. Rangayyan failed to conduct this analysis, his opinion is incomplete and insufficient, and should be excluded as unhelpful and unreliable.

A. Dr. Rangayyan Did Not Provide A Reason Or Motivation To Combine Prior Art References In His Report, In His Supplemental Report, Or In His Declaration.

In its opposition brief, HP mischaracterizes Dr. Rangayyan's Report in an effort to cover up the fact that he did not apply the proper obviousness methodology. For example, HP's claim that Dr. Rangayyan *explained* that "the prior art references are addressed to the same image enhancement problems and objectives" is not supported anywhere in Dr. Rangayyan's Report. *See* D.I. 216, at 13. Dr. Rangayyan merely quoted portions of prior art references without explaining what problems the authors of the references were attempting to solve or whether one of skill in the art would be motivated to combine the teachings of any particular reference with any of the others. *See* D.I. 170, Ex. A, at ¶¶ 37–38, 53–55, 65, 73, 75, 81–82, 91–99, 101–102, 118–119.

HP's claim that Dr. Rangayyan explained that a person of ordinary skill in the art would "understand the mathematical implications" of utilizing values in algebraic functions like those claimed in the '381 patent in his Report is equally unsupportable. *See* D.I. 216, at 13. The paragraphs that HP cites for this proposition show that Dr. Rangayyan's opinions were limited to what he believed was disclosed in the references. He did not provide any opinions on whether one of skill in the art would understand how to combine the mathematical formulas contained in any of the identified references to achieve an image enhancement algorithm that worked.

Apparently recognizing this shortfall, HP submitted a belated Declaration from Dr. Rangayyan that attempted to correct this omission. *See* D.I. 190, at ¶¶ 9–10. Dr. Rangayyan's opinions in his Declaration are conclusory and provide no analysis as to how or why one of skill in the art would combine the mathematical formulas found in each reference.³

9. A person of ordinary skill in the art, would understand that the various elements disclosed by a reference — such as the mathematical algorithms utilized in a contrast enhancement method — could be combined with elements from other references to perform contrast enhancement functions with specific characteristics.

10. A person of ordinary skill in the art would understand the implications of particular mathematical expressions used in contrast enhancement algorithms and be able to predict the effect that use of those expressions, alone or in combination with other mathematical expressions, would have on a contrast enhancement algorithm.

See id.

³ As Polaroid explained in its Reply in Support of its Motion for Summary Judgment that Claims 1–3 Are Not Obvious, the mathematical formulas contained in each reference differ from each other and from the formula disclosed in the '381 patent. *See* D.I. 225, at 14–15.

Nor did Dr. Rangayyan fix this omission at his deposition, as HP now suggests. *See* D.I. 216, at 14. At his deposition, Dr. Rangayyan testified that when he teaches image processing to students at the University of Calgary, he provides them with “a wide variety of equations, methods, formulas, algorithms” and that he would expect that his “students and researchers and workers in the area to be able to mix and match, borrow components *from one section into another.*” *Id.* (referencing Scott Decl. Ex. C, Rangayyan Dep. at 227:3-10 (emphasis added)). Dr. Rangayyan was specifically testifying about the disclosures within a single reference; he was not describing his expectation with respect to equations described in multiple references. In any event, Dr. Rangayyan’s cited testimony does not help HP as Dr. Rangayyan was testifying about what he currently expects and not what someone of skill in the art would be able to do in 1988, the date at which the ’381 patent application was filed.

Dr. Rangayyan also did not testify that he would expect his students (much less one of ordinary skill in the art pertaining to the ’381 patent) to be able to mix and match the specific formulas found in the prior art references identified by HP. *See* Ex. A, Rangayyan Dep. 226:20–227:10. Although Dr. Rangayyan did testify that Lee taught both linear and non-linear transformations, he did not testify that Lee — or any other reference — even suggested that its formulas could be modified to achieve the power-law transformation that is claimed in the ’381 patent. *See id.* Dr. Rangayyan also did not testify that he expected his students, or researchers, to be able to mix and match equations that contain different variables and are designed to solve different problems, such as the references that HP identifies. *See* D.I. 151, Ex. B, at 14–29.

Contrary to HP’s assertions, Dr. Rangayyan never opined that the transformation algorithm taught in the ’381 patent consists of already known elements combined in known ways to achieve results that are easily predictable by a person of ordinary skill in the image

enhancement art. *See* D.I. 216, at 14. HP does not contend that this opinion is contained in Dr. Rangayyan's Report. *See id.* Instead, HP contends that Dr. Rangayyan's Supplemental Report contains these opinions. *See id.* Even a cursory review of HP's citations to Dr. Rangayyan's Supplemental Report shows that HP's contention is wrong. For example, paragraph 43 of Dr. Rangayyan's Supplemental Report merely describes the purported disclosure contained in the Okada reference:

43. Okada describes a gamma-correction circuit — a transfer function — that varies the output based on the input as a function of an average. (Okada, col. 5, lines 1-4). This transfer function uses a power law function of X^γ . (Okada, col. 2, lines 46-57). The value of γ is changed according to the average (APL). (Okada, col. 5, lines 16-32; Fig. 5).

D.I. 190, Ex. C (Supp. Rangayyan Report) at ¶ 43. There is no opinion about the algorithm contained in the '381 patent. Paragraphs 83, 123 and 136 are likewise inapposite.

HP also mischaracterizes the disclosures contained in paragraph 121 of Dr. Rangayyan's Report. HP claims that Dr. Rangayyan explained the following in ¶ 121 of his Report:

In digital image processing courses taught to university students from 1983 to 1987, a typical student would learn and understand digital image processing techniques such as those disclosed in the Okada, Lee, Rangayyan, Wang, Narendra, Richard and Iida references. Therefore, prior to the filing of the application which matured into the '381 patent, the well known aspects of the art of digital image processing included: (i) the use of various mathematical techniques to determine an average of values associated with a selected group of pixels, including the pixel being processed; (ii) choosing a gamma transfer function based on the average value of a neighborhood of pixels adjacent to the pixel being processed; (iii) use of a ratio in a contrast enhancement transformation function; (iv) the use of mathematical transfer functions that utilized ratios of a local average over a value within the available dynamic range; and (v) the transformation of the pixel being processed based on the gamma value produced by the gamma transfer function.

See D.I. 216, at p. 15. In fact, however, HP manipulated the actual disclosure in paragraph 121 to meet its objective. In HP's brief, HP added the language that is in bold and underlined and HP deleted the language that is shown below as stricken from Dr. Rangayyan's report:

121. In ~~my~~ digital image processing courses taught to university students from 1983 to 1987, a typical student would learn and understand ~~these~~ digital image processing techniques. That is, the state of the art in *digital image processing* prior to the time of **such as those disclosed in the Okada, Lee, Rangayyan, Wang, Narendra, Richard and Iida references.** **Therefore, prior to the** filing of the application ~~for~~ **which matured into** the '381 patent ~~made it well known: to sharpen an image or enhance the contrast of the image; to detect edges as part of contrast enhancement; to apply various mathematical transformations,~~ **the well known aspects of the art of digital image processing included: (i) the use of various mathematical techniques** to determine an average of **values associated with** a selected group of pixels, including the pixel being processed; ~~choose~~ **(ii) choosing** a gamma transfer function based on the average value of a neighborhood of pixels adjacent to the pixel being processed; **(iii)** use **of** a ratio in a **contrast enhancement** transformation function; ~~and transform~~ **(iv) the use of mathematical transfer functions that utilized ratios of a local average over a value within the available dynamic range; and (v) the transformation of** the pixel being processed based on the gamma value produced by the gamma transfer function. **See Rangayyan Report, ¶ 121.**

Compare D.I. 216, at p. 15 with D.I. 170, Ex. A, ¶ 121. Thus, the actual disclosure in Dr. Rangayyan's Report is not limited to contrast enhancement techniques. Rather, Dr. Rangayyan was describing the image enhancement field in general. In addition, the actual paragraph from Dr. Rangayyan does not mention the prior art references that HP identified or the mathematical techniques or functions, as HP claims in its brief.

HP also contends that Dr. Rangayyan explained in paragraph 121 that "the teachings of each of the prior art references were well-known to persons skilled in the art at the time of filing of the '381 patent, as was the use of the disclosed techniques in combination." See D.I. 216, at 15. This characterization of paragraph 121 is simply wrong — Dr. Rangayyan did

not mention the other prior art references he identified and did not discuss the combination of their teachings.

HP also contends that Dr. Rangayyan explains that “it would be obvious to combine any of these teachings to a problem in image processing” and cites to paragraphs 37 through 121 of his Report. *See* D.I. 216, at 15. These paragraphs, however, do not contain any opinion about obviousness, and do not address combining references in any way. D.I. 190, Ex. A (Rangayyan Report) at ¶¶ 37-121.

Similarly, HP mischaracterizes paragraph 9 of Dr. Rangayyan’s Declaration. HP contends that paragraph 9 contains the following disclosures:

A person of ordinary skill in the art would understand the implications of particular mathematical expressions used in contrast enhancement algorithms and be able to predict the effect that use of those expressions, alone or in combination with other mathematical expressions, would have on a contrast enhancement algorithm. *See id.* at ¶ 9.

See D.I. 216, at 16. Dr. Rangayyan’s actual paragraph 9 contains no such conclusion. The language HP deleted is designated with the strikethrough, and the language that HP added is bold and underlined:

9. A person of ordinary skill in the art, would understand ~~that the various elements disclosed by a reference—such as the mathematical algorithms utilized in a contrast enhancement method—could be combined with elements from other references to perform contrast enhancement functions with specific—characteristics~~ **the implications of particular mathematical expressions used in contrast enhancement algorithms and be able to predict the effect that use of those expressions, alone or in combination with other mathematical expressions, would have on a contrast enhancement algorithm.**

Compare D.I. 216, at 16 with D.I. 190, ¶ 9.

The other citations in HP's opposition brief also do not show a motivation to combine. For example, HP contends that Dr. Rangayyan's opinion that the Wang reference teaches that "[similar constituent parts of image processing techniques] are often used, or are attempted to be used, interchangeably" is evidence of a motivation to combine. *See* D.I. 216, at 15. Dr. Rangayyan, however, was discussing the Wang reference in general and was not providing an opinion on whether one of skill in the art would combine the references he identified in the manner he proposes. *See* D.I. 170, Ex. A, at ¶ 81 ("State of the Art in Digital Image Processing" section of his report).

Likewise, the other paragraphs, 16-21, set forth Dr. Rangayyan's conclusions — without justification — regarding obviousness with respect to each reference individually. None of these paragraphs discuss combining the teachings of the prior art references as Dr. Rangayyan proposes.⁴

Even Dr. Rangayyan's Declaration — belatedly submitted in support of HP's opposition to Polaroid's summary judgment motion of no obvious — does not provide the additional evidence regarding correct legal standards as HP claims. D.I. 216, at *e.g.*, 13, 15-16. Despite HP's submission of this Declaration after Polaroid's motion to exclude Dr. Rangayyan's opinions on obviousness, his opinions continue to be conclusory and do not provide a motivation to combine:

⁴ HP also provides incorrect cites for a number of its alleged examples of a "motivation to combine." D.I. 216, at 16. Specifically, starting with the second bullet on page 19 and continuing through the top of page 21 of HP's brief, the cites to Dr. Rangayyan's Supplemental Report are not accurate and do not coincide with the referenced paragraphs in Dr. Rangayyan's Supplemental Report, as HP contends.

A person of ordinary skill in the art would look to the component disclosures of prior art and appreciate their usefulness in combination with components taught elsewhere. (D.I. 216, at 15);

A person of ordinary skill in the art, would understand that the various elements disclosed by a reference – such as the mathematical algorithms utilized in a contrast enhancement method – could be combined with elements from other references to perform contrast enhancement functions with specific characteristics. (*id.* at 15–16);

A person of ordinary skill in the art would appreciate the effect of different mathematical operations and expressions on a contrast enhancement algorithm – such as the use of exponential expressions (or “power-law” functions). A person of ordinary skill would be adept at modifying algebraic functions and predicting the effects of such modifications on the resulting contrast enhancement algorithm. As a result, it would be both trivial and expected that someone of ordinary skill in the art would modify linear contrast enhancement functions to use exponential (or “ power-law”) expressions. (*id.* at 16).

In each of these paragraphs, it is evident that Dr. Rangayyan was attempting to respond to Polaroid’s motion to exclude his obviousness opinions. Yet, even in this belated Declaration, Dr. Rangayyan did not provide any reasoning or analysis for why one would be motivated to combine.

HP has not referenced — and cannot cite — any opinions contained in either Dr. Rangayyan’s Report, his Supplemental Report, or his Declaration that sufficiently apply the proper obviousness methodology.

B. Dr. Rangayyan Did Not Apply The Standard From KSR.

HP claims that Dr. Rangayyan applied the exact standard that was used in *KSR* to determine whether the asserted claims are obvious in light of various combinations of prior art references. D.I. 216, at 12. This is not so.

In *KSR*, the Engelgau patent, which covered an adjustable electronic pedal, was at issue. *KSR*, 127 S. Ct. at 1736. The court found that the Engelgau patent was obvious based on a variety of factors. First, the Asano patent taught everything in claim 4 of the Engelgau patent except the use of a sensor to detect the pedal's position to transmit it to the computer controlling the throttle. *Id.* at 1738. The use of the sensor was revealed in other prior art such as the '068 patent and other sensors utilized by Chevrolet. *Id.* The Rixon patent taught the use of sensors on adjustable pedals, but the sensor was located in the footpad, which caused wire chafing. *Id.* at 1736. The Smith patent taught how to mount a sensor onto a pedal's support structure. *Id.* at 1737.

The District Court correctly reasoned that “(1) the state of the industry would lead inevitably to combinations of electronic sensors and adjustable pedals (2) Rixon provided the basis for these developments; and (3) Smith taught a solution to the wire chafing problems in Rixon, namely locating the sensor on the fixed structure of the pedal.” *Id.* at 1738. This conclusion was supported by the fact that during the prosecution of the Engelgau patent, the PTO initially rejected claim 4, which was a broader version of the claim 4 in the Engelgau patent. *Id.* at 1737. The reason it was rejected was because at that point, the claim did not include the requirement that the sensor be placed on a fixed pivot point so the PTO found that claim was obvious in light of the prior art. *Id.* The Supreme Court agreed with the District Court's analysis finding that there was “little difference between the teachings of Asano and Smith and the adjustable electronic pedal disclosed in claim 4 of the Engelgau patent. A person having ordinary skill in the art could have combined Asano with the pedal position sensor in a fashion encompassed by claim 4, and would have seen the benefits in doing so.” *Id.* at 1743.

The Supreme Court clarified that “these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* at 1740. This is exactly the case here. In this case, Dr. Rangayyan’s opinions are not based on the simple substitution of one known element for another nor does he assert the mere application of a known technique to a piece of prior art ready for the improvement. The Supreme Court provides guidance on how to facilitate the analysis in such cases:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. ***To facilitate this review, this analysis should be made explicit.***

Id. at 1740-41; *see also In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). The Supreme Court further explained that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR*, 127 S. Ct. at 1741.

This analysis is exactly what is lacking in Dr. Rangayyan’s analysis. In contrast to *KSR*, Dr. Rangayyan did not explicitly articulate any reason to combine the prior art references (or to modify a single prior art reference), instead concluding without reasoning that combining those elements (or modifying a single prior art reference) would be obvious to one of ordinary skill in the art.

In *Takeda*, this Court held that a patent claim on a drug compound was not invalid for obviousness because the defendant did not provide evidence of a motivation to combine prior art references or a reasonable expectation of success. *Takeda*, 542 F. Supp. 2d at 359. The defendant's evidence of motivation to combine consisted solely of its expert's opinion that each limitation of the asserted claim was disclosed in the prior art and that the prior art references taught the same process for creating a compound. *Id.* at 357. This Court found this did not suffice to show motivation to combine or any reasonable expectation of success. *Id.* at 359. Similarly, here, Dr. Rangayyan merely opines that the claimed limitations are found in the prior art. He does not provide any opinion that there was a motivation to combine references or to modify a single reference. Moreover, HP does not — and cannot — argue that Dr. Rangayyan provided an opinion that one of skill in the art would have a reasonable expectation of success in combining the references (or modifying a single prior art reference) as Dr. Rangayyan proposes. Polaroid's motion should be granted for this reason alone. *See* D.I. 170, Ex. A (Rangayyan Report); D.I. 190, Ex. C (Supp. Rangayyan Report) and Declaration.

CONCLUSION

For the foregoing reasons, this Court should grant Polaroid's motion and exclude Dr. Rangayyan's opinions on obviousness.

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CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on June 23, 2008, I electronically filed the foregoing with the Clerk of the Court using CM/ECF, which will send notification of such filing(s) to the following:

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